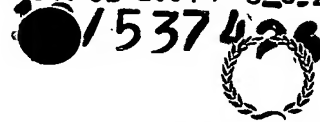




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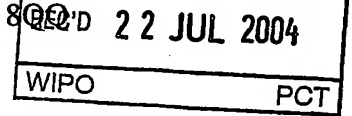


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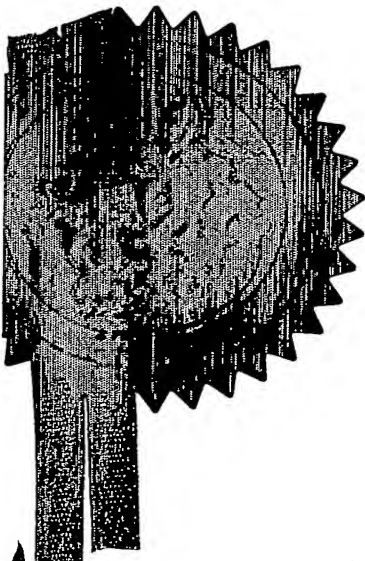
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28JUN03 EB18371-2 D01682

P01/7700 0.00-0315031.5

27 JUN 2003

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1. Your reference  
POLYCASE

2. Patent application number  
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0315031.5

27 JUN 2003

3. Full name, address and postcode of the or of each applicant (underline all surnames)

LANDOR

Lando & Hawa International Limited  
Riverside House,  
River Way,  
Harlow,  
Essex

Patents ADP number (if you know it)

CM20 2DW

866256 1001

If the applicant is a corporate body, give the country/state of its incorporation

A British Body Corporate

4. Title of the invention

SUITCASE

5. Name of your agent (if you have one)

Patrick Russell-Rayner,  
Business Centre West,  
Avenue One,  
Business Park,  
Letchworth Garden City,  
Hertfordshire  
SG6 2HB

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

6692001

Patents ADP number (if you know it)

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Country

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Date of filing  
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Number of earlier application

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8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

YES

- a) any applicant named in part 3 is not an inventor, or
  - b) there is an inventor who is not named as an applicant, or
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- See note (d))

Patents Form 1/77

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Continuation sheets of this form	None
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Abstract	NONE
Drawing(s)	THREE + THREE

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Priority documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (Patents Form 7/77)

Request for preliminary examination and search (Patents Form 9/77)

Request for substantive examination (Patents Form 10/77)

Any other documents  
(please specify)

11. I/We request the grant of a patent on the basis of this application

Signature

Date 20/6/03

12. Name and daytime telephone number of person to contact in the United Kingdom

Pat Russell-Rayner 01462 672 538

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## SUITCASE

This invention relates to the construction of luggage such as suitcases for use by travellers.

5 Many constructions of suitcases for use by travellers are known. These known constructions are of varied form and not infrequently include at least a pair of wheels/rolls for facilitating the movement of the case by a user.

In addition, it is also known to provide suitcases incorporating a towing handle structure which is usually moveable between a user case towing position and a retracted stowage position.

10 Suitcases, can conveniently be considered as comprising two major types, the first the so-called soft case and the second the so-called hard case.

The soft case conventionally incorporates a metal or plastics framework which provides the means whereby the visual appearance of the case is obtained and also serves to support a soft outer covering.

15 In many constructions the soft case includes a base portion into which articles to be transported are introduced and a lid portion usually hinged to the base portion. A Zip fastener arrangement is conventionally provided to provide an all round connection between the lid portion and the base portion when it is required to close the case.

20 The Zip fastener arrangement can comprise a single Zip operable around essentially the total periphery of the case, or two Zips, each associated with one half of the periphery of the case.

The above mentioned hard skinned cases are regarded as being hard skinned in the sense that the walls, top and bottom are so moulded or otherwise formed as to be substantially rigid or hard skinned in the sense that the walls, top and bottom are formed by a material that sufficiently rigid in that it retains its shape and form in use. A material commonly used for forming hard skinned cases is a polypropylene.

Such cases comprise two rigid shells that are hinged one to the other and which meet with an inter-nesting tongue and groove formation. Mechanical fasteners such as hinged locks are used to retain the lid portion and the base portion in a closed position.

These suitcases are not infrequently considerable heavier than soft cases in weight.

Bearing in mind that many present day modes of travel, i.e., by aircraft, coach etc. impose a weight limit upon the amount of luggage an individual passenger may carry it has been found that whilst the hard case affords a considerably higher degree of security and damage resistance the extra weight of the case imposes considerable limitations upon the actual weight of articles that may be introduced into the case.

On the other hand whilst the lighter weight of the soft case allows more articles to be packed into the case weight for weight the lesser security afforded by the soft outer covering against damage deliberate or otherwise introduces problems for the traveller.

It is an object of the present invention to inter alia a suitcase construction that avoids at least some of the problems arising from the use of the known construction of hard and soft type cases.

A further object is the provision of a suitcase whose appearance departs from that of a purely standard rectangular block like formation for a suitcase.

Broadly, according to a first aspect of the invention there is provided a suitcase construction having a base portion and a lid portion that retain their shape thereby affording rigidity to the case whilst at the same time enabling use of at least one Zip fastener arrangement for the purposes of closing the case.

Broadly according to a further aspect of the invention a suitcase is provided with two sets of floor engaging support members, there being a set being provided one to each of two transverse surfaces of the suitcase whereby the case can be stood on a support surface in one or the other of two orientations.

Preferably, two of the elements of one such set are provided upon the bottom portion and incorporate wheels/rolls whereby the case is rendered towable, and in which at least one other element of this set is located on the lid portion, the arrangement being such as to provided a stable support for the case when not being towed.

In a preferred construction that side of the base portion that is opposite to the wheels/rolls is provided with a case carrying handle and a retractable towing means..

Preferably, two elements of the second such set are provided upon a longer side wall of the base portion and two further elements of this set are provided upon a corresponding wall of the lid portion, the arrangement being such that the case when resting on the elements of this set is stable, and wherein a carrying handle is provided on the side of the bottom portion that is opposite to the side with said elements.

In a further preferred construction the case incorporates means whereby the volume of the case is expandable.

Conveniently, the expandability is achieved by providing a double Zip fastener arrangement of which a first Zip portion is associated with the closing of the case and of which a second Zip portion is associated with the expandability of the case.

5 Preferably, the second Zip portion is interposed between the lid section of the case and the portion of the Zip, formation associated with the closure of the case.

Conveniently, the second Zip portion includes a first part attached to the case and additionally along the peripheral edge of a strip of flexible material circumscribing the mouth of the lid portion and attached thereto, and a second part that is attached to the peripheral edge of the strip of material that is remote  
10 from the case lid portion.

For a better understanding of the invention and to show how to carry the same into effect reference will now be made to the accompanying drawings in which:-

Figure 1 is a view of the carrying handle side of a first embodiment of a solid skinned suitcase case incorporating the concepts of the invention;

15 Figure 2 is a view of the opposite side to carrying handle side of a solid skinned suitcase case shown in Figure 1;

Figure 3 is a top view of the suitcase as shown in Figures 1 and 2;

Figure 4 is a bottom view of the suitcase as shown in Figures 1 and 2;

Figure 5 is a face view of the suitcase shown in Figures 1 to 4;

20 Figure 6 is a face view of the opposite side of the case as shown in Figure 5;

Figure 7 is a side view of a second embodiment of a suitcase which is volume wise expandable the Figure illustrating the suitcase when unexpanded; and

Figure 8 is a side view of the suitcase of Figure 7 when the suitcase is expanded.

Referring to the drawings, the suitcase shown therein includes a main body or base portion 1 and a lid portion. Both the base portion and the lid portion are formed from a plastics material of such nature that the portions are self supporting and at the same time are capable of being stitched to a Zip fastener arrangement as will be discussed hereinafter.

In a particular construction the material used for the lid and base portions is a mixture of polycarbonate material with an ABS plastics of the kind conventionally used for hard side framed luggage.

10 As seen in orientation of the suitcase as shown in Figure 1 the base portion includes a bottom main surface 3, longer side walls 4 and 5, and shorter side walls 6 and 7.

Also as seen the Figures 1 and 2 the lid portion can be regarded as including a top main surface 8, shorter side walls 9 and 10 and smoothly curved regions 11 and 12 that can be regarded as forming the remaining longer walls of the lid portion.

Since the lid and base portions are intended to connect one with the other when the suitcase is closed, as is shown in the Figures, the main body portion 1 and the lid portion 2 are respectfully provided with complementary profiled stiffening ribs 13 and 14 respectively.

20 In the embodiment of the suitcase as shown in the Figures the lid portion is pivotally secured to the base portion by hinging arrangement schematically shown at 15 shown and is maintained in its closed position by a circumscribing double Zip fastener arrangement 16 including two operating members 17 which can be set to allow the lid portion 2 to be pivoted to an open position and when the two  
25 operating elements are moved to the positions shown in the Figure 3 the lid section is held in its closed position as shown.



The Zip fastener arrangement 16 includes the conventional Zip tooth strips 16A and 16B are connected to the stiffening ribs regions of the base portion and the lid portion by machine stitching. It will be appreciated that the provision of a Zip fastener arrangement 16 with its toothed strips 16A and 16B and operating members 17 for the closure of the base and lid portions affords an all round closure to the case whilst at the same time eliminating the need for a tongue and grove engagement region between the lid and base portions and mechanical closures such as locks..

The suitcase incorporates a user towing facility. Thus the suitcase is provided at two corners of the base portion with wheel mounting units 18. As can be seen from Figure 4 the units each include a housing 18 that is secured to the suitcase corners. A wheel 19 is suitably mounted in the housing 18 such that the wheel projects rearwards and downwards of the base portion 1.

A towing handle assembly 20 is provided in the base portion. This handle assembly is housed within the structure of the base portion so that when not in use its is retractable into an effectively concealed position. Thus the base portion is moulded with suitable recess for accommodating the handle assembly.

In use the handle is pulled upwardly (as indicated in the Figures) to a fully extended user position.

A first suitcase carrying handle 21 is secured to the base section at a location adjacent to the towing handle location. A second suitcase carrying handle 22 is secured to the base portion, this latter handle being on the longer wall 6.

As will be noted from the Figures 1 to 6 the side walls of the base portion and the lid portion are curved inwardly as particularly shown in Figures 5 and 6.

In addition ,the central sections of the larger faces of the base portion and the lid portion are raised relative to the the remainder of the associated larger face. The

face is additionally provided with a plurality of raised rib formations in the region of the wheel housings 18.

Furthermore as may be noted from Figures 1 and 2 the larger face of the base portion is inwardly curved.

- 5 Also the walls of the base portion in the vicinity of the handles 21 and 22 are countersunk so as to provide space for the fingers of the user when using the handles.

One of the functions of the raised and curved formations of the base and the lid portions is to provide for additional strength of the base and the lid portions since the provision of such formations for stiffen of the larger areas of the suitcase to reduce flexure in use.

It will be appreciated that the provision of a carrying handle implies that a person carrying the suitcase by way of the handle will for what ever reason from time to time set the case down into the floor/ground.

- 15 As a consequence of this in order to avoid damage and/or disfigurement to the suitcase the suitcase is provided with support elements which are intended to support the actual base and lid portions away from floor/ground contact.

In the case of the carrying handle 21 a support bar 23 is provided on the end wall 12 of the lid portion, the support bar being shaped as shown in Figure 5.. This bar 20 is so dimensioned such that when the suitcase is oriented as shown in Figures 1 and 2 the suitcase is supported in a generally vertical setting .

In the case of the carrying handle 22 a group of four support elements 24 are provided, two on the side wall 3 of the base portion and two on the wall 10 of the lid portion.

Figures 7 and 8 illustrate a modified construction of the suitcase shown in the Figures 1 to 6. The construction of the suitcase of Figures 7 and 8 is generally

similar to that of the Figures 1 to 6. The essential difference is that the suitcase of Figures 7 and 8 is provided with the facility of expandability in volume.

5 This expandability is achieved by providing an additional double Zip fastener arrangement 25. One of the tooth strips 25A of the fastener arrangement 25 is stitched to the lid portion 2. The other toothed strip 25B of the fastener arrangement is attached to the portion of the fastener arrangement 16 associated with toothed strip 16B. A flexible band or gusset 26 is provided between the  
10 toothed strips 25A and 25B of the fastener arrangement 25. The provision of this gusset enables the lid portion 2 to be bodily moved away from the base portion to an extent defined by the width of the gusset 26..

With this arrangement when both the Zip fastener arrangement 16 and the Zip fastener arrangement 26 are both in their closed positions as shown in Figure 7  
15 the suitcase is set to its minimum volume and is in its closed condition.

When the Zip fastener arrangement 16 is closed as is shown in Figure 8 and the zip fastener arrangement 25 is open as is schematically indicated in Figure 8 the lid portion is bodily movable away from the base portion by a distance defined by the width of the gusset 26 to increase the overall volume of the case whilst the  
20 case remains closed.

It will be appreciated that closure of the Zip arrangement 25 will draw the lid portion towards the base section 1 and thus reduce the overall case volume to that defined by the shaping of the base and lid portions.

If it is desired to provide for a double expansion of the volume of the overall  
25 volume of the case the base portion can be achieved by providing a further Zip Fastener arrangement (not shown) between the fastener arrangements 16 and 25.

In this construction the case will incorporate three Zip formations, two associated with the expandability of the case and the third associated with the opening and closing of the case.

- 5 The utilisation of a material to form the base and lid portions that retain their body shape whilst being capable of by stitched to Zip fastener arrangements has enabled the elimination of internal framing such as conventionally incorporated in the so-called soft cases and has also enabled the elimination of the need for relatively heavy mechanical case locking arrangements together with heavy tongue and groove features conventionally used with the so-called hard cases.
- 10 This combination has effectively resulted in a hard case construction with significant reduction in weight as compared with equivalently sized conventional hard case.

- In addition, it will be appreciated that the construction proposed by the present invention has enabled the introduction of the feature content volume expansion
- 15 into a hard case construction.

It has been found that the case construction as above discussed has resulted in a case construction that has been found easier to handle as compared with equivalent sized hard cases..

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Fig 1

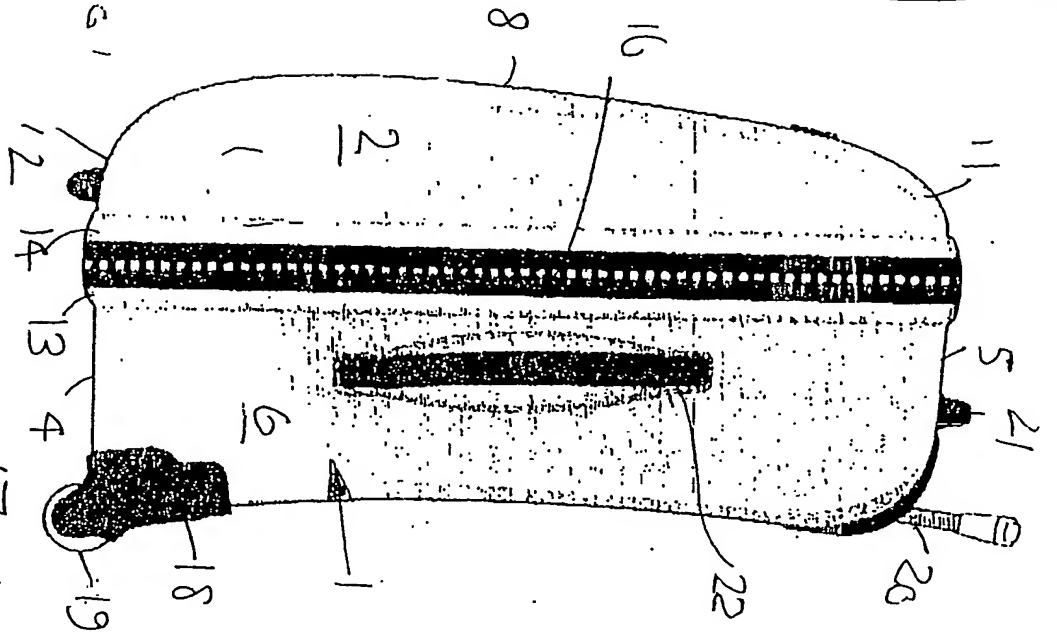


Fig 2

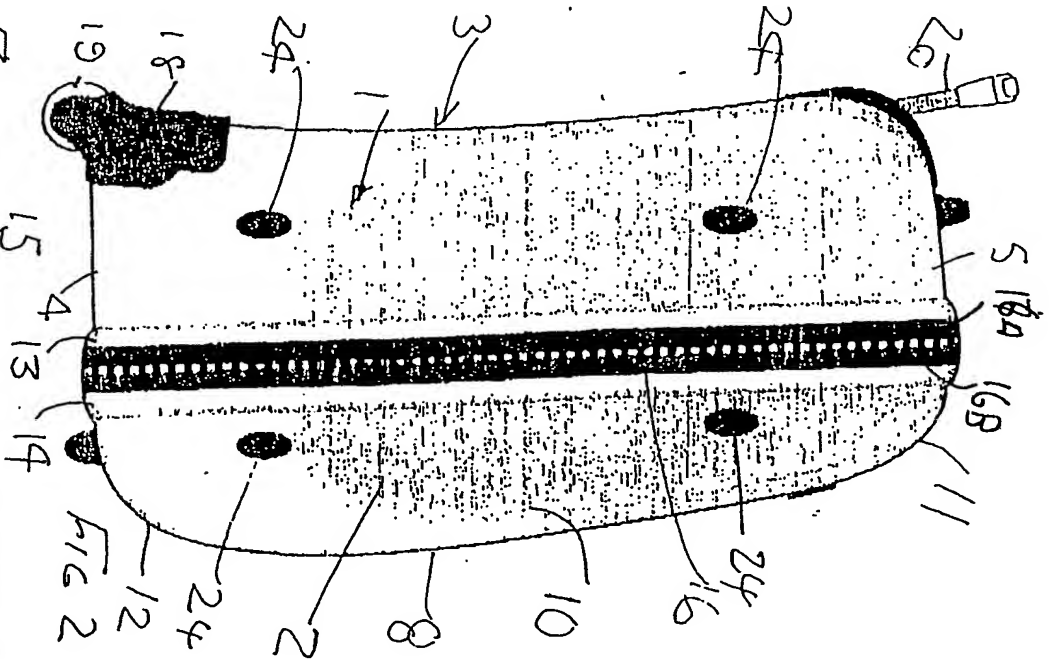


Fig 3

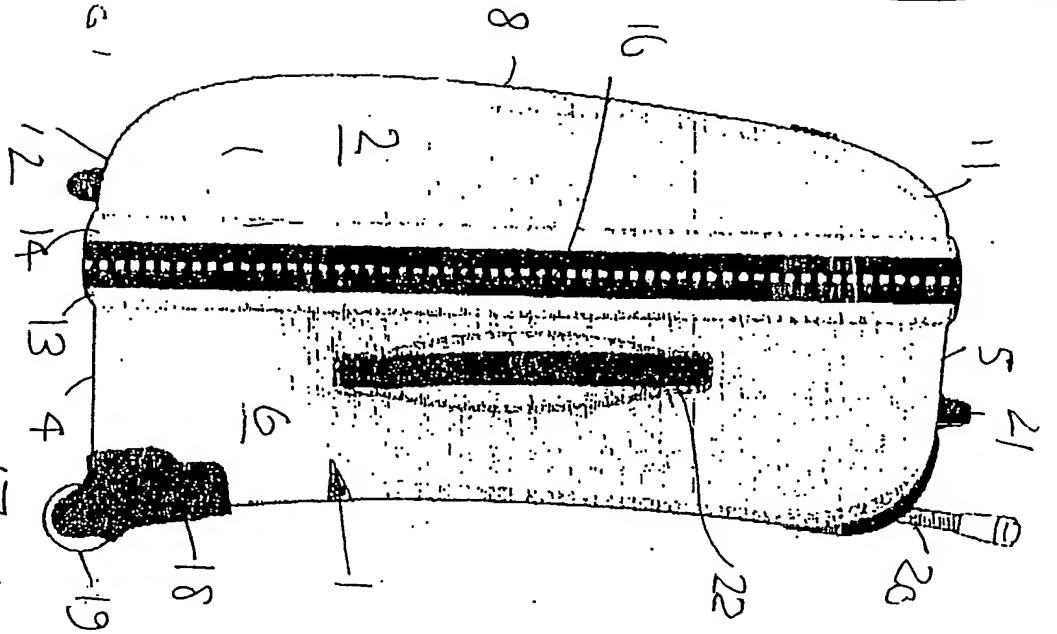
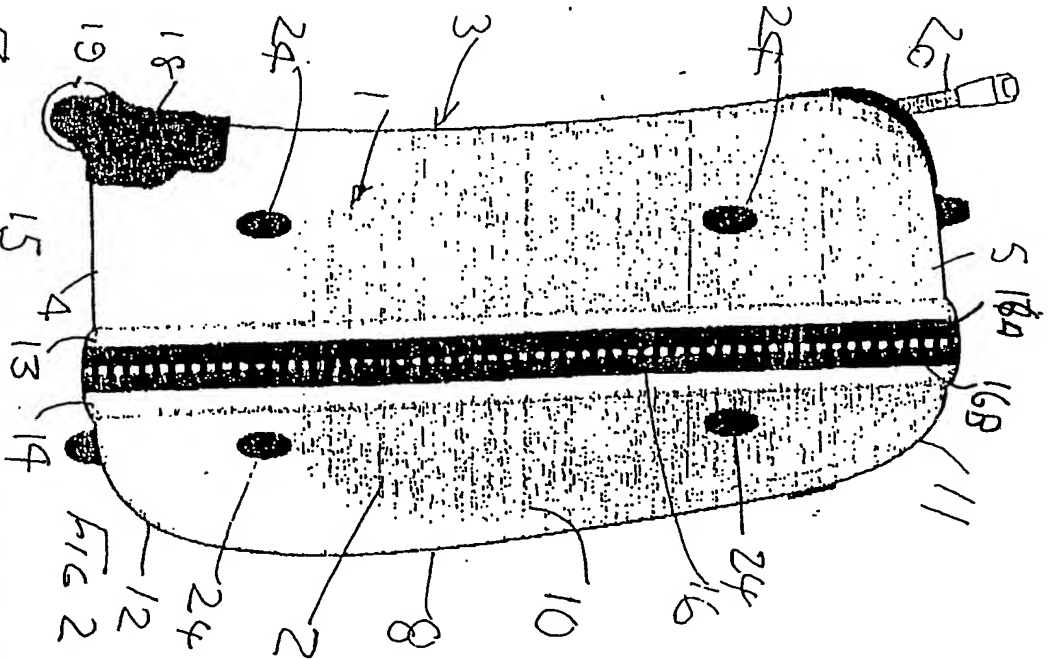
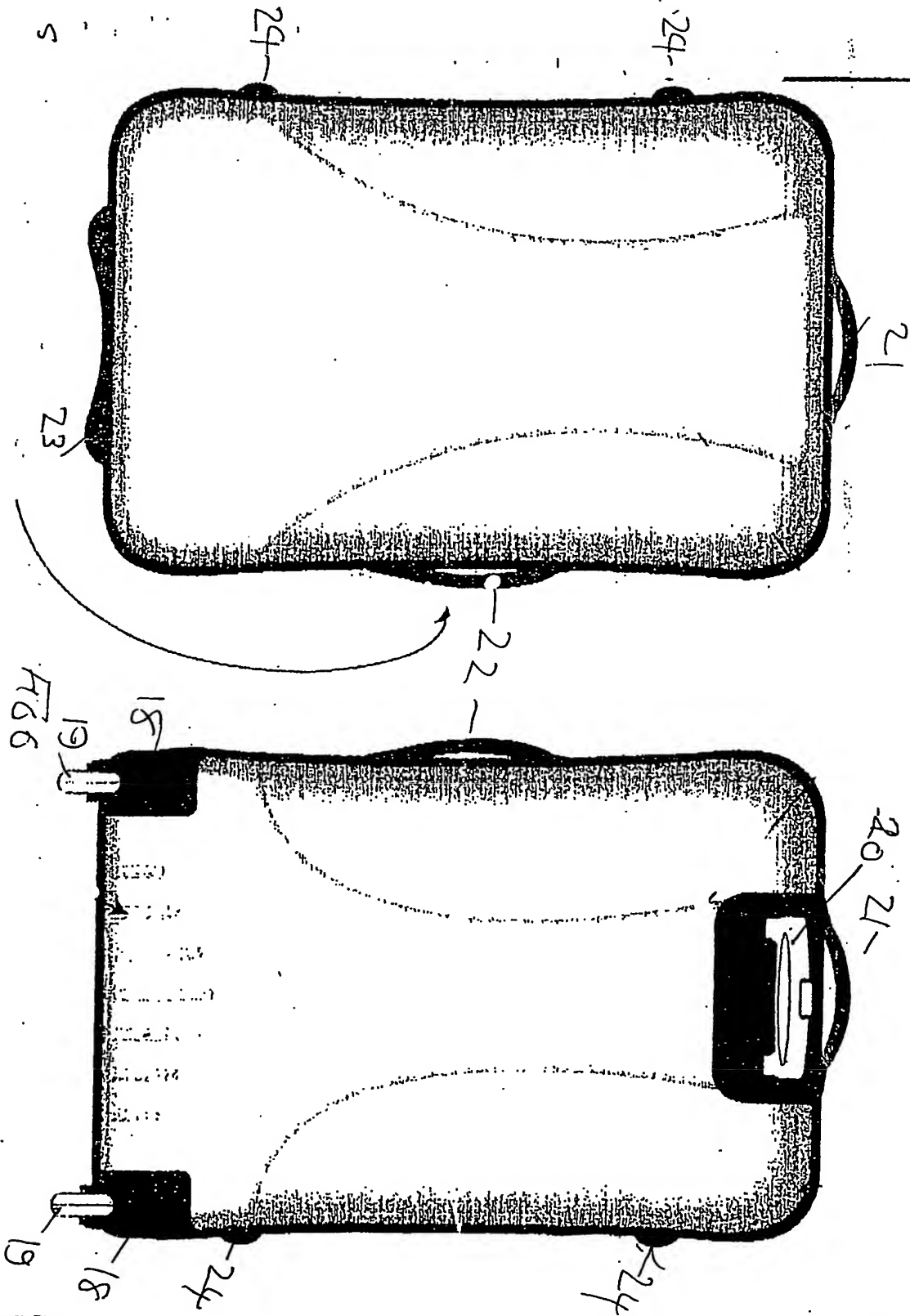


Fig 4

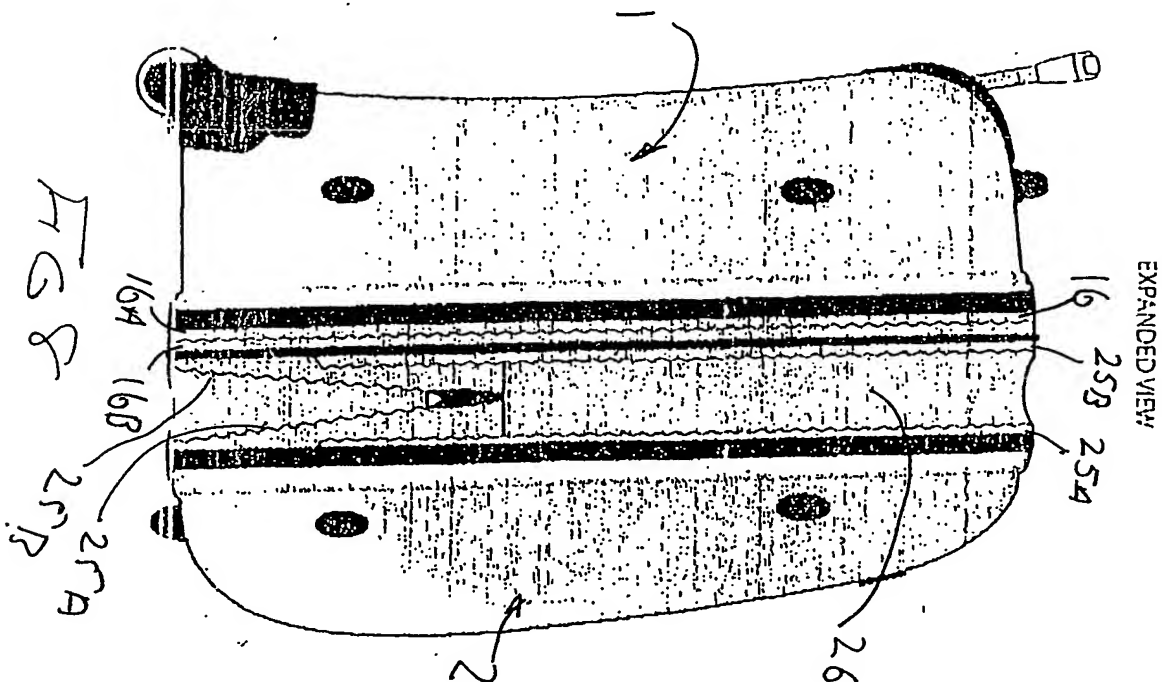
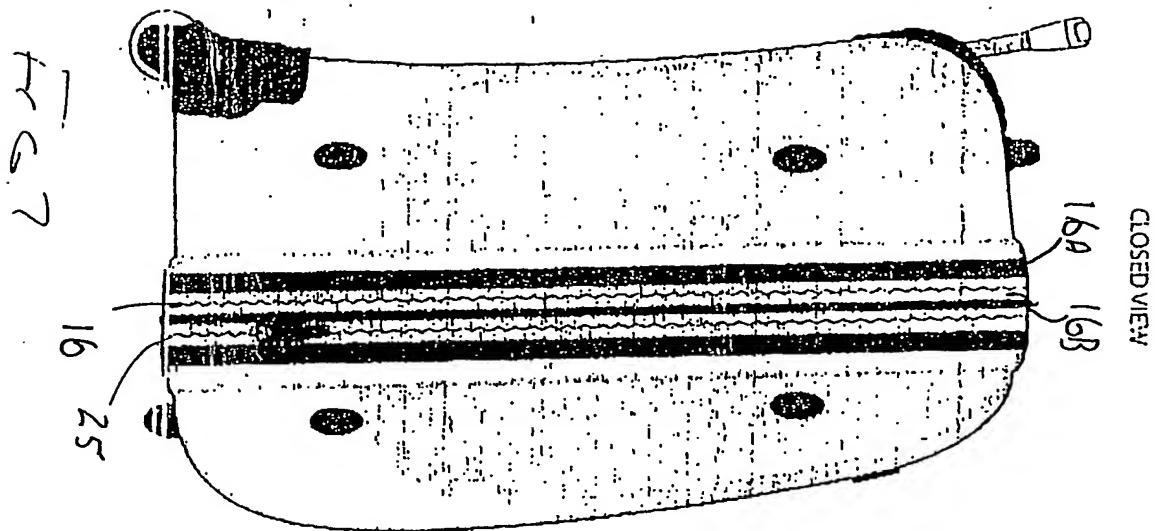


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FIG 5

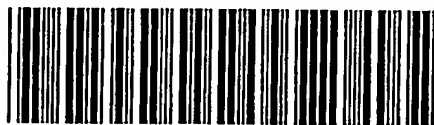


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